

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 1/12/10. Claims 50, 51, 53, 55-58, 62, 64-66, 72, 75, 76, 78, 80, and 82 have been amended and claim 54 has been cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 72-75, 77-79, 82, 83, and 84-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 6,522,725) in view of Chang (US 2002/0034971), and further in view of Minear et al. (US 6,941,135).

Regarding claim 72, Kato teaches a system for providing hands-free communication for at least one telecommunication terminal (speech recognition for carrying out a service operation), the system comprising a service server (switching system) and a server-based speech recognition system (speech recognition section), the service server being configured to (column 2, lines 25-50):

provide at least one program (speech recognition program) for implementing a speech processing algorithm; and

transmit the at least one program to the at least one telecommunication terminal (column 3, lines 38-47; speech recognition program is downloaded from the switching system to the telephone terminal).

Kato broadly teaches the concept of a telecommunication terminal downloading a speech processing algorithm, but does not explicitly teach that the telecommunication terminal implements the program at least temporarily and is configured to implement the at least one program to process a speech signal and to transmit the processed speech signal over at least one communication network. Chang discloses performing multiple applications on a microprocessor or DSP of a wireless phone (abstract). Chang teaches that limited function programs such as voice recognition, speech synthesizer, acoustic echo canceller and noise suppressor programs (speech processing algorithms) may be loaded onto a phone for the duration of a call (temporarily). Chang further teaches that these limited function programs such as the acoustic echo canceller and noise suppressor can be used during a call thus showing that a processed speech signal is transmitted over at least one communication network (paragraphs 20, 21, 23,

24). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Kato, to include the capability of loading a speech processing algorithm temporarily, as taught by Chang, in order to reduce the on-chip memory of the telecommunication terminal thereby reducing the size and cost of the DSP. Furthermore, it would have also been obvious to one of ordinary skill in the art at the time the invention was made to additionally modify the invention of Kato to allow a processed speech signal to be transmitted, as taught by Chang, in order to improve the quality of the speech signal by cancelling echo and/or suppressing noise for instance.

The combination of Kato and Chang does not explicitly teach that the service server is configured to establish a connection with the at least one telecommunication terminal in response to a request signal from the server-based speech recognition system and that the program is transmitted in response to a defined request signal. Minear discloses a system and method for managing the deleting and reloading of software application components on a wireless device (abstract). Minear teaches that a user is prompted (requested) to make a connection with an application download server (figure 5, item 102) and if a link is established, the wireless device can download an application (figure 5, item 116). Thus Minear broadly teaches the concept of a server requesting a mobile device to establish a connection for which a program is downloaded in response to the request. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Kato and Chang, to allow the switching device to request connection and download a program in

response to the request, as taught by Minear, in order to prompt the user to determine whether a download of a program is desired, thereby allowing the system to be more flexible and user friendly.

Regarding claim 73, Chang teaches the telecommunication terminal is a mobile telecommunication terminal (paragraph 15).

Regarding claims 74 and 83, Chang teaches the speech processing algorithm includes at least one of a hands-free, an echo cancellation, a speaker verification, a speaker recognition, a speaker classification, a voice verification, a voice recognition, a text-to-speech and a noise reduction algorithm (paragraph 21).

Regarding claim 75, Kato teaches establishing, over the at least one communication network, a connection between the telecommunication terminal and a server-based speech recognition system (column 3, lines 33-57).

Regarding claim 77, Kato teaches the establishing the connection is performed using respectively assigned identifiers (column 3, lines 58-65; kind of telephone terminal).

Regarding claim 78, Kato teaches a server-based speech recognition system configured to enable the at least one program to be selected and at least temporarily loaded and implemented on the at least one telecommunication terminal in response to identification parameters associated with the at least one telecommunication terminal (column 3, lines 58-65).

Regarding claim 79, Kato teaches the service server is configured to enable the at least one program to be selected and at least temporarily loaded and implemented on

the at least one telecommunication terminal in response to identification parameters associated with the at least one telecommunication terminal (column 3, lines 58-65).

Regarding claim 82, the limitations are rejected as applied to claim 72.

Regarding claim 84, Kato teaches calibrating, by the telecommunication terminal, at least one of an A/D conversion and a D/A conversion (column 2, lines 32-37).

Regarding claim 85, Kato teaches the further signals include at least one of test signals, compensation signals, charging signals, identification parameters, and vector signals (column 4, lines 23-36).

Regarding claim 86, Kato teaches the telecommunication terminal as recited in comprises an encoder unit (figure 4, items 305, 301).

Regarding claim 87, Kato teaches the telecommunication terminal comprises a conversion device configured to convert a speech signal between different frequency bands (figure 4, items 301, 302).

4. Claims 76, 80, and 81, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 6,522,725), Chang (US 2002/0034971), and Minear et al. (US 6,941,135), as applied to claims 72 and 82, and further in view of Anastasakos et al. (US 2004/0192384) (hereinafter Anastasakos).

Regarding claim 76, the combination of Kato, Chang, and Minear teaches the limitations set forth in claim 72, but does not explicitly teach that the service server is provided by a WEB server, and further comprising at least one of a server-based speech recognition system, a charging and a billing system provided by the WEB

server. Anastasakos discloses a method and apparatus for selective distributed speech recognition. Anastasakos teaches a WEB server, and further comprising at least one of a server-based speech recognition system, a charging and a billing system provided by the WEB server (figure 3, items 162, 108, 172, 110; paragraphs 21, 33, 35). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Kato, Chang, and Minear to include web capability and billing, as taught by Anastasakos, in order to further enhance the communication capability of the server and allow the network to charge based on certain parameters or specific price preferences.

Regarding claims 80 and 81, Anastasakos teaches a server-based speech recognition system and at least one of a charging system and a billing system configured to charge, in response to at least one of an identification and a charging parameter associated with the at least one telecommunication terminal, for a service at least temporarily provided by a server-based speech recognition system to the at least one telecommunication terminal (figure 3, items 162, 108, 172, 110; paragraphs 21, 33, 35).

5. Claim 88 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 6,522,725), Chang (US 2002/0034971), and Minear et al. (US 6,941,135), as applied to claim 82, and further in view of Zhang et al. (US 2004/0058647) (hereinafter Zhang).

The combination of Kato, Chang, and Minear teaches the limitations set forth in claim 82, but does not explicitly teach that the communication terminal further comprises an interface device configured for at least one of wired and wireless connection of at least one of an external microphone and a loudspeaker. Zhang discloses an apparatus and method for providing hands-free operation of a device. Zhang teaches an interface device configured for at least one of wired and wireless connection of at least one of an external microphone (headset microphone) and a loudspeaker (figures 2, 3, 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the terminal of Kato, Chang, and Minear to include integration of a headset so that a user would not have to hold the telephone while a conversation or submitting a voice command.

Allowable Subject Matter

6. Claims 50-53, 55-71, 89, and 90 are allowed.

Response to Arguments

7. Applicant's arguments with respect to claims 72-88 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Nam Huynh/
Examiner, Art Unit 2617